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ABSTRACT

In spring 1992, the Southport Institute for Policy Analysis conducted a study of the role that community colleges play as providers of workplace education (WPE) programs, i.e., programs established for, or in cooperation with, a private sector company to help employees obtain a General Equivalency Degree (GED) or upgrade their basic skills. A survey instrument was distributed to all 1,585 members of the American Association of Community Colleges, asking about college involvement in WPE, the number and types of companies served, skills taught, the frequency of WPE participants' concurrent or subsequent community college enrollment, ways in which companies usually became involved, WPE costs and revenues, staffing, and anticipated demand. Study findings, based on a 40% response rate, included the following: (1) 69% of the colleges provided WPE separate from Job Training Partnership Act activities; (2) colleges were just as likely to be working with small companies (less than 50 employees) as large companies (more than 500 employees); (3) 60% of the participating businesses were in manufacturing; (4) over 70% of the colleges taught mathematics, reading, and writing skills, 40% offered English as a Second Language and GED courses, over 60% taught problem-solving skills, and 74% provided interpersonal skills instruction; (5) nearly 60% of the colleges reported that employees enrolled in other college courses; (6) two-thirds of the colleges with WPE employed "work force specialists"; (7) colleges spent an average of $90,000 for their programs; (8) the most common funding source was full-time equivalency reimbursements; (9) over 90% of the colleges reported an interest in expanding their programs; and (10) the two largest barriers to program expansion were lack of funds and personnel. The survey instrument is included. (MAB)

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LEARNING THAT WORKS

THE PROVISION OF WORKPLACE EDUCATION BY COMMUNITY COLLEGES

By Ann Katherine Dilcher

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By Ann Katherine Dilcher

AMERICAN ASSOCIATION
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in collaboration with
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TABLE OF CONTENTS

INTRODUCTION 1

RESEARCH FINDINGS 7

SUMMARY AND CONCLUSIONS 21

REFERENCES 27

APPENDIX 29

ACKNOWLEDGEMENTS 33

THE AUTHOR 35

INTRODUCTION

This paper is one of a series of published reports and working papers that present the findings of the Southport Institute for Policy Analysis's Project on Corporate Decision-Making and Basic Skills Training in Small and Medium-Sized Firms. The other publications detail the incidence of workplace education and reorganization of work specifically in firms with 50 to 500 employees (Bassi, 1992b), and provide a summary statement of the project's findings together with a policy prescription based on the Institute's investigative work of the needs and concerns of small and medium-sized companies (Chisman, 1992). In this paper, the focus is on one important provider of workplace education, the local community colleges.

The project's initial phase consisted of 72 case studies of small and medium-sized firms of which approximately two-thirds had implemented workplace education programs.[1] These case studies were completed in the summer of 1991 by 15 field researchers who followed a very detailed, systematic protocol. This first stage was important in coming to an understanding of the complex issues involved. This knowledge was then used to inform the second stage of the project. The second phase of the research was a series of linked national mail and telephone surveys of businesses. The survey research was carried out in the spring of 1992.

At the same time, the Institute approached James F. McKenney, director of the Office of College/Employer Relations at the American Association of Community Colleges (AACC), with a proposal to survey AACC membership. Mr. McKenney and his staff were extremely helpful in reviewing the survey design and organizing the mailing. The surveys were sent out in mid-January 1992, and all the responses were returned directly to the Institute. The analysis of the AACC survey, which is the focus of this paper, was conducted exclusively by the Institute's staff, and while the Institute gratefully acknowledges the assistance received from the Office of College/Employer Relations at AACC, the Association has not commissioned, reviewed, or in any way exercised control over the findings in this paper.

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1 Four profiles of case study firms can be found in *Ahead of the Curve* (Forrest P. Chisman, et al., Southport Institute for Policy Analysis, 1992), and the findings from the case studies are summarized in *Education in the Workplace* (Laurie Bassi, Southport Institute for Policy Analysis, 1992a).

The second stage of the project confirmed the belief that there exists a real need for education in the workplace. Employers, both those who have implemented workplace education programs and those who have not, estimate that 30 to 40 percent of their hourly workers have inadequate basic skills (e.g., reading and writing English, mathematics, speaking and understanding English, participating in problem solving, and interpersonal skills). Not only is there a need for education, there is also a demand by business for workplace education.

The Institute found that employers are engaging in basic workplace education programs for their hourly employees and that there is a growing trend towards business involvement in this type of training. Best estimates from the Institute's national survey indicate that between 3 and 5 percent of firms have a substantial workplace education program (Bassi, 1992b). In addition, of the businesses that do not have such programs, approximately 30 percent indicated that they are interested in workplace education and would consider implementing a program at their company (Bassi, 1992b).

The firms surveyed were able to answer many of the questions concerning the provision of workplace education. They were able to tell us who their workplace education instructors are; who the employers have turned to for help with assessing the educational needs of their employees and in developing programs for the company; and, for the businesses without such programs, who they would most like to provide this service (to whom they would be most receptive). However, these firms are not in the business of general education, and, not surprisingly, they could provide few specifics about the education provider side of the partnership.

The Institute's initial case studies found that firms are linked to a variety of education providers depending on several factors, including location and kinds of skills being taught. Firms relied on in-house trainers, company volunteers, community college instructors, adult education teachers, and local literacy volunteers. Overall the non-company education provider of choice appeared to be the local community colleges. This observation was borne out in the national surveys of employers. In the firms with workplace education programs in place, the most frequent instructors are in-house company teachers (38 percent), company volunteers (16 percent), and community college teachers (15 percent). Another 14 percent of the instructors are teachers contracted by the company, but it is impossible to distinguish from the survey responses if they are community college instructors or not.

When asked to indicate from which sources the firms would prefer to receive information and technical assistance on workplace education, the firms chose local community colleges, vocational schools, or technical institutes first (85.7 percent) followed by local adult education programs or high schools (76.3 percent). While

both employers who have a workplace education program and those who do not ranked community colleges at the top, companies already involved in workplace education were significantly (at the .05 level of significance) more likely to indicate that they would prefer assistance from community colleges than the companies without education programs (92.4 percent versus 82.6 percent). Thus, the companies that have struggled to set up programs and know the importance of outside assistance in the process see community colleges as the best possible source for such help. All other possible sources of assistance trailed far behind: local literacy councils or other community groups (44.5 percent); state governments (35.9 percent); federal government agencies (20.6 percent); business groups or trade associations (18 percent); and trade unions (15.6 percent).

The role of the community colleges as a provider of workplace education is worthy of study, both because they are current providers of such education and because they are the provider to which companies indicate they are most receptive. Furthermore, while there has been some research on the provision of basic education services to firms, there has been no comprehensive national research on the provision of these services by community colleges. With the initial access kindly provided by AACC, the Institute's research as presented in this paper represents a first step towards identifying and quantifying the role of community colleges in the provision of workplace education.

The following section outlines the major research questions imbedded in the AACC survey. Then the methodology and response rate of the survey are discussed. The third section details the major findings, and the paper ends with a summary of the conclusions and possible policy implications.

One final note: because this paper deals exclusively with community colleges, use of the word "college" should be understood to refer back to community colleges and not to any other institutions that were not part of the study.

RESEARCH QUESTIONS

The Southport Institute's national survey of community colleges focused on nine questions:

① *What percentage of community colleges are providing workplace education to companies?*

② *To how many and what type of companies do the community colleges provide workplace education?*

③ *What skills are the community colleges teaching in their workplace education programs?*

④ *How often do employees who participate in programs through their employers enroll in other courses at the community college?*

⑤ *How do companies usually become associated with the community college as a workplace education provider?*

⑥ *What resources, both financial and in terms of personnel, do the community colleges devote to workplace education programs?*

⑦ *From what sources do the community colleges receive funding for workplace education programs?*

⑧ *How much demand by companies for workplace education do the community colleges perceive, and what are the possibilities for expansion of their workplace education programs? How much interest is there on the part of the community colleges in becoming more involved in providing workplace education to companies?*

⑨ *What are the most important barriers to the expansion of community colleges' provision of workplace education?*

SURVEY METHODOLOGY AND RESPONSE RATE

In coordination with AACC, the Southport Institute designed a short 20-question survey[2] to measure the extent of community college involvement in workplace education. For the purposes of the study, a "workplace education program" was defined as a program established for, or in cooperation with, a private sector company to help the employees of the company to: 1) obtain a General Equivalency Degree (GED) or some other alternative high school degree; or 2) upgrade basic skills – reading, writing, mathematics, English as a Second Language (ESL), problem solving, or interpersonal skills. The colleges surveyed were asked explicitly about their activities in any of these areas – separate from any activities related to the Job Training Partnership Act (JTPA).

On January 14, 1992, AACC sent out the two-page survey to its entire membership. A cover letter from AACC President David Pierce accompanied the

2 A copy of the survey can be found in the Appendix.

survey, and a business reply envelope addressed directly to the Southport Institute was also enclosed. The surveys were addressed to the president of each college. Follow-up calls indicated that the survey was often directed to and answered by the individual in charge of workplace education at the institution.

The total survey sample size of possible individual providers was 1,585. Responses from different departments or centers within a single college were combined and included as a single-location respondent (i.e., those from the continuing education section and the business-industry center). A total of 608 usable surveys were returned, yielding a response rate of 40 percent. Responses were received from 47 states, Puerto Rico, and Guam.

RESEARCH FINDINGS

What percentage of community colleges are providing workplace education to companies?

Of the institutions that responded to the survey, 413 (69 percent) indicated that they provide workplace education, separate from JTPA activities, to companies. However, some consideration must be given to the fact that the response bias probably favors those with programs. Assuming that *every* college with a program responded to the survey, 418 of 1,585 or 26 percent of all campuses are working with employers to educate their work forces. This is an extremely conservative estimate since collective responses from districts that indicated their campuses were involved in workplace education, but which could not be disaggregated, were excluded. It is also a conservative estimate because, undoubtedly, at least some of the non-respondents are providing workplace education.

In addition, a single campus in a multi-campus system is often responsible for workplace education. In these cases, the provision for the community may be 100 percent, although only 25 percent (or one of four local campuses) are counted in the incidence estimate. For example, Pima Community College - East Campus in Tucson, Arizona, is not involved in workplace education; Pima Community College - Community Campus works with employers in the area.

Assuming that those colleges that do not offer workplace education programs are less likely to respond than those with programs, it should be expected that as the response rate for any region of the country increases, the incidence of workplace education would decrease. This inverse relationship is not borne out by the data on a regional level. The regions with the highest response rate did not necessarily have the lowest percentage of colleges with workplace education programs. Therefore, a reliable estimate of the extent to which colleges are involved in workplace education lies much closer to the unqualified survey finding of 68 percent than the absolute lowest bound of 27 percent.

The institutions with workplace education programs are spread fairly evenly throughout the United States. Table 1 shows the percentage of institutions with programs within each zip code region. Within every region, more than half of the colleges that responded to the survey are working with business to provide workplace education. Region 2 reports the greatest level of action, with 87.9 percent of the colleges reporting that they provide workplace education. This result

is driven, in part, by the strength of college involvement in North Carolina where the community college system is the designated provider of adult education.

TABLE 1

Postal Zip Regions	# of Respondents	% of Respondents Within Region with Workplace Education
Zip Code Not Given	10	61.5
0 CT, MA, ME, NH, NJ, PR, RI, VT	34	68.2
1 DE, NY, PA	36	77.8
2 DC, MD, NC, SC, VA, WV	91	87.9
3 AL, FL, GA, MS, TN	78	67.1
4 KY, IN, MI, OH	55	56.4
5 IA, MN, MT, ND, SD, WI	47	68.1
6 KS, MO, IL, NE	53	79.3
7 AR, LA, OK, TX	67	59.7
8 AZ, CO, ID, NM, NV, UT, WY	43	68.3
9 AK, CA, HI, OR, WA	86	56.5

The organization and delegation of responsibility for adult basic education varies greatly from state to state. For example, the community colleges in North Carolina provide a great deal of the state's adult education. This mandate is reflected in our survey, which found that 100 percent of the community colleges in North Carolina provide workplace education. On the other hand, in California the delegation of responsibility for workplace education is much less clear. There are several parties involved in workplace education: adult education, volunteer literacy councils, library literacy programs, and community colleges; adult education is not a primary mission of the community colleges in California. This mix of providers is borne out in the survey data which shows that just under half (49 percent) of community colleges in California are providing workplace education.

Individual state tabulations show that colleges in nearly every state provide workplace education to businesses. The percentage of responding colleges that work with businesses is over 50 percent for all but six states, and of those six, four fall within the 40-49 percent range: California 49 percent, Ohio 48 percent, Louisiana 40 percent, and Montana 40 percent. Low response rates probably bias the estimates for some states; nevertheless, the six states and one territory in which 100 percent of the responding colleges report that they provide workplace educa-

tion are Indiana, Maryland, Nevada, North Carolina, Oregon, Rhode Island, and Guam.

The incidence of workplace education involvement does vary a great deal with the total enrollment size of the institution.[3] Of those colleges with fewer than 1,000 students, 44 percent have workplace education programs. At least 65 percent of all the larger colleges report they have such programs: 66 percent of colleges with a total enrollment of 2,500 to 4,999; 73 percent of colleges with 1,000 to 2,499; 78 percent of those with 5,000-7,999 total students; and 81 percent of those with a total enrollment of over 8,000.

The Institute's survey of employers indicates that a handful of businesses report that their involvement in workplace education dates back as far as the early 1950s. However, investment in workplace education by companies has been growing steadily since the late 1980s. Community college interest in the provision of workplace education follows this same pattern. While one institution has been in the business of providing workplace education since 1911, on the whole this area of education is relatively new to many institutions. The mean year when institutions began providing workplace education was 1984, and over half of the respondents started to provide this service between 1987 and 1991. There were even a few respondents who had just begun to offer programs in 1992.

To how many and what type of companies do the community colleges provide workplace education?

In 1991 the average number of companies served by an institution was 19. Of the companies served, on average 21 percent were small firms with less than 50 employees, 47 percent were medium-sized firms with 50 to 500 employees, 20 percent were large firms with over 500 employees, 13 percent were identified as branch plants, and 1 percent were franchises (see Table 2). Compared to the true distribution of enterprises by employee size in the United States, colleges are working disproportionately with medium-sized and large firms.[4] However, in relation to the Institute's estimate that only a small percentage of small and

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3 Total enrollment data are based on the October 1990 figures reported in the *Statistical Yearbook of Community, Technical, and Junior Colleges, 1991* (Mahoney and Sallis, 1991).

4 According to 1991 figures from the U.S. Small Business Administration's Small Business Data Base, 96.3% of enterprises have less than 50 employees, 3.5% have between 50 and 500 employees, and only .2% have more than 500 employees.

medium-sized businesses are engaged in workplace education, it is encouraging to find that colleges are providing education to all sizes of firms and that the percentages are not entirely dominated by big business.

TABLE 2

Type of Company	Mean Percentage
Small firms (less than 50 employees)	20.5
Medium-sized firms (50-500 employees)	46.8
Large firms (more than 500 employees)	20.5
Branch plants of large companies	13.0
Franchises of large companies	1.1

Percentages sum to just over 100 due to double reporting in a few cases.

The colleges were also asked how many of their workplace education programs in 1991 were provided to manufacturing firms. From the earlier case studies of firms, it appeared that workplace education was occurring disproportionately in the manufacturing sector. The colleges confirmed this observation. On average, 60 percent of the firms served by the colleges were firms in manufacturing. Manufacturing enterprises make up only 6.7 percent of the total number of enterprises in the United States (U.S. Small Business Administration, 1991).

The colleges also confirmed an earlier finding that most workplace education programs are taught at the company's worksite. In the Institute's survey of businesses, 78 percent of the firms with workplace education programs reported that the instruction took place on site, with the next most common location being a community college (7 percent). The colleges indicated that, on average, three-fourths of their workplace education programs in 1991 were offered at the company's workplace.

What skills are the community colleges teaching in their workplace education programs?

Programs of all types are being provided to businesses by community colleges. 76.2 percent of the institutions teach mathematics in their workplace education programs, 45.6 percent teach English as a Second Language (ESL), 74.1 percent teach reading and writing, 41.5 percent offer GED or alternative high school degree courses, 63.5 percent include problem-solving skills in the workplace education curricula, and 74.4 percent teach interpersonal skills (e.g., effective communication, team building). Over 90 percent of the colleges teach at least one of the more traditionally academic skills (i.e., mathematics, English, and GED coursework).

Within their workplace education programs, very few colleges (8 percent) only have programs in problem solving and/or interpersonal skills and do not teach any of the academic skills.

Looking only at five large states, it is clear that the colleges are tailoring their programs to the skill demands of the local area. Table 3 compares the percentage of colleges teaching each skill in California, Illinois, New York, North Carolina, and Texas.

TABLE 3

% of Colleges with Workplace Education Programs that Teach Each Skill

Skills Taught	CA	IL	NY	NC	TX	All States
Mathematics	57.1	82.6	52.9	91.7	67.9	76.2
ESL	82.1	60.9	35.3	38.9	63.0	45.6
Reading and writing English	67.9	78.3	52.9	91.7	71.4	74.1
GED or other alternative high school degree	7.1	69.6	23.5	94.4	42.9	41.5
Problem solving	42.9	60.9	76.5	63.9	60.7	63.5
Interpersonal skills	64.3	69.6	94.1	61.1	75.0	74.4

These state comparisons reflect the differences in industries' demand, employee need, and college jurisdiction among regions. As one might predict, colleges in California, Texas, and Illinois provide more ESL instruction than colleges in the other states. North Carolina colleges are more likely to be teaching mathematics, reading and writing, and skills needed for a GED. One possible explanation for this fact is that the community colleges are the education providers with the mandate for adult education in the state of North Carolina. Also, there is greater need for GED curriculum and related education in North Carolina, where high school completion rates are among the lowest in the nation. In contrast, in California, where few community colleges have primary jurisdiction over adult education, only 7 percent of the colleges report that they have programs that are targeted towards the GED or other alternative high school degrees. New York stands out as the state where the highest percentage of colleges are teaching interpersonal skills.

Table 4 shows that there are several statistically significant (at the .05 level of significance) differences between the colleges that offer a specific skill and those that do not. Colleges that provide workplace education in math and reading or writing work with significantly fewer small companies and a higher percentage of

branch plants. Those that provide ESL instruction to firms work with significantly more large firms and fewer medium-sized firms. Colleges that provide GED programs to firms work with a significantly smaller percentage of franchises.

TABLE 4

Top number is the mean for the colleges that provide the skill.
Bottom number is the mean for the colleges that do not provide the skill.

Skills Taught	# Firms Served	%Small Firms	%Medium Firms	%Large Firms	%Branch Plants	%Franchises	% in Manuf.
Mathematics	20	17.3	48.1	20.8	14.2	.5	64.5
	17	30.7*	42.6	19.6	8.7*	3.1	46.6*
ESL	21	20.0	43.7	23.0	13.5	.7	54.0
	17	20.1	49.7*	18.1*	12.5	1.4	65.3*
Reading and writing	20	18.0	47.1	21.7	14.6	.6	61.6
	17	27.8*	45.7	17.4	8.1*	2.5	56.3
GED or high school degree	15	19.4	49.7	20.0	14.8	.3	67.5
	22	21.2	44.8	20.9	11.6	1.7*	55.1*
Problem solving	23	21.4	47.0	19.5	14.6	1.7	61.1
	12*	18.9	46.4	22.4	10.3	.1*	58.9
Interpersonal skills	24	22.1	47.0	20.5	11.8	1.4	59.6
	6*	15.6*	46.4	20.5	16.0	.1*	62.2

An asterisk (*) indicates a statistically significant difference between colleges that teach the specified skill and those that do not (at the .05 level of significance).

There are also significant differences between the skills being taught and the industry sector of the companies that are served. Those colleges that include math and GED classes in their workplace education programs provide education to a much higher percentage of manufacturing firms than do the colleges that do not offer these skills. On the other hand, colleges that provide ESL instruction to firms work with a significantly smaller percentage of manufacturing firms. These statistics confirm the Institute's earlier findings that programs in manufacturing firms more often include mathematics, while non-manufacturing firms are more likely to report that they are teaching their employees ESL.

Colleges that offer workplace education programs in problem solving and those that teach interpersonal skills appear to be the schools that are much more involved in providing workplace education. These colleges are working with a significantly higher total number of companies (12 as opposed to 23 for colleges teaching problem solving, and six versus 24 for colleges teaching interpersonal skills). Colleges that teach interpersonal skills work with a higher percentage of small firms, as do those with problem-solving programs (although the difference is not sig-

nificant for the latter group). In addition, these colleges are working with significantly more franchises than colleges that do not teach these "softer" skills (i.e., problem solving and interpersonal skills).

How often do employees who participate in programs through their employers also enroll in other courses at the community college?

Workers who participate in workplace education programs often enroll in other courses (e.g., job-specific training or associate degree programs), either after they complete the workplace education program or at the same time they are participating in it. Sixteen percent of colleges responded that workers often (75 percent of the time) pursue further education at the institution. Another 43 percent of colleges said that workers sometimes (50 percent of the time) continue their studies. Only 4 percent of colleges reported that workers never enroll in other courses at the college, while 18 percent noted that workers "almost never" (25 percent of the time) take other courses.

These data are important to community colleges because they may show that workplace education programs are a good recruitment tool. Workers who learn foundational skills in a workplace program can and do continue their education at the college. Unfortunately, the Institute's case study research does not fully support these optimistic estimates of how many employees use a workplace education program as their entry point into more advanced continuing education or training.

How do companies usually become associated with the community college as a workplace education provider?

When asked how companies usually become involved in the institution's workplace education programs, 36 percent of colleges reported that the company contacts them, while another 24 percent answered that the college contacts the company. The remaining 40 percent wrote that both types of contact are equally frequent.

The marketing of workplace education to the firms differs among states. For example, none of the community colleges in Florida said that they first contact the companies for which they provide education. In Illinois, the majority of colleges responded that they are involved in recruiting companies. These differences in which organization, the firm or college, usually makes the first contact appear to affect the number or types of firms the college serves.

There are several significant differences (at the .05 level of significance) between the programs at colleges where the firm makes the first contact and those where the college actively contacts businesses or where both types of contact are equally frequent. The colleges that do not actively market their workplace educa-

tion serve fewer companies, 12 versus 22, on average, and they teach fewer skills. These colleges also work with a different constituency. They work with fewer franchises (.1 percent v. 1.6 percent), fewer medium-sized companies (43 percent v. 47 percent), and a higher percentage of branch plants (17 percent v. 11 percent).

What resources, both financial and in terms of personnel, do the community colleges devote to workplace education programs?

Two-thirds of the institutions with workplace education report that they employ "work force specialists" or other staff who help companies understand their need for workplace education and help with the design of those programs. Also, 40.4 percent report that they have full-time instructors who provide workplace education for the college. Of these institutions, the average number of full-time teachers is six, approximately one full-time teacher for every three companies. In addition, 85.2 percent of the institutions have part-time instructors working to provide workplace education. The average number of part-time workplace education teachers employed by an institution is 14, or almost four part-time teachers for every three companies.

These results were perhaps the most surprising of the survey. Discussions with AACC staff and with specific community colleges centered around several qualifications that should be applied to these findings. Most importantly, many of the full-time teachers reported on the survey do not work in the field of workplace education (as defined in the survey) full-time but have other responsibilities at the college (e.g., continuing education, literacy efforts not related to the workplace, very skilled technical training courses, or JTPA activities).

Overall, in the last fiscal year, spending on workplace education by colleges stayed the same or increased only slightly. The colleges also reported that the number of students served had increased to a greater degree than funding in the last fiscal year, as had the number of firms served. Figure 1 summarizes the responses to the question: "In your last fiscal year, has your workplace education program expanded, contracted, or remained about the same in terms of:"

FIGURE 1

	Expanded	Contracted	Same
Spending	55.6%	10.8%	33.6%
# of Students Served	70.9%	9.4%	19.6%
# of Firms Served	66.6%	9.9%	23.5%

Twenty-six percent of the colleges with workplace education programs reported that they spent nothing on these services in the last fiscal year. This response does not mean that no money was spent; several respondents wrote in to clarify their answer. In some cases, this response means that all the money spent was recouped through grants and fees charged to the companies receiving assistance from the college. For those colleges that did report a dollar sum, the amount spent on workplace education ranged from $525 to $2 million,[5] with the mean lying at just over $90,000. Thirty percent of institutions did not know the amount spent on workplace education. A comparison of the amount each college spent in 1991 on workplace education with the amount they reported that companies paid the college shows that the colleges are supporting approximately one-third of their workplace education expenses with grants, FTE appropriations, or other state and federal monies.

On average in 1991 colleges spent $10,919 per company on workplace education. The colleges received $7,328 per company as a reimbursement of all or some of the cost of the workplace education program by the company. There are too few observations to compare these data on a state basis. However, when aggregated by zip code region, there are two interesting outlying regions. In 1991 Region 8 (AZ, CO, ID, NM, NV, UT, WY) spent approximately $20,000 per company, nearly double the national average. Yet, the colleges in Region 8 receive only about $3,000 per company, less than half the national average. This region receives the majority of its funding for workplace education from state and federal grants. At the other extreme, in Region 6 (KS, MO, IL, NE) the colleges report that they spend less per company than they receive ($5,400 v. $6,200). However, this difference is not statistically significant.

From what sources do the community colleges receive funding for workplace education programs?

The institutions were asked how they fund their workplace education programs and the approximate amount of funding received from each source. Table 5 shows what percentage of the institutions with workplace education programs received funding from each source, and of those that reported a dollar amount, the average

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5 It is important to note that these numbers represent "best estimates" and not strict accounting. Some colleges included the amount spent that they received back from the firms and others did not. Some colleges may have only reported teachers' salaries, while others may have included other expenses. To keep the survey simple and the response rate up, the question did not ask for a detailed accounting of the dollars spent.

total amount received by each college and the average amount received per company served.

Over a third of the colleges reported that they received funding from state grants or appropriations designated specifically for workplace education. The amounts received from the states ranged from just over $1,000 to $325,000. One-fourth of the specific state grants fell in the $10,000 and under range, while 75 percent of the grants were under $75,000. Fewer colleges funded their workplace education activities with money from state grants not specifically earmarked for such use. However, the range of non-designated state funds received is greater than that of the state workplace education grants ($1,000 to $500,000).

TABLE 5

Sources of Funding for Workplace Education	% Receiving Funding	Average $ Amount Received	Average $ Received per Company
State FTE reimbursement	46.2	113,009	8,407
State workplace education grant or appropriation	36.0	54,769	5,484
State grant for other purpose	18.8	67,151	4,931
Federal grant or contract	21.2	115,576	27,043
Foundation or private grant	7.4	25,538	3,955
Reimbursement of all or some of the cost by the companies	73.6	107,347	7,328

Note: The estimates for FTE reimbursements are skewed by the different ways in which the colleges reported this sum. Some colleges clearly reported the entire amount of FTE funds received for the year while others tried to approximate what fraction of the FTE funds went specifically for workplace education activities.

Federal grants or contracts for workplace education ranged from $1,500 to $600,000, with half of the colleges receiving $50,000 or less.[6] Only 30 colleges used money from foundations or private grants to fund their workplace education

6 Aside from the small grants made by the U.S. Department of Education's Workforce Literacy Grant Program, most of the federal support reported here is not specifically allocated for workplace education. The colleges are most likely reporting some combination of funds from the Adult Education Act, the Carl D. Perkins Vocational and Applied Partnership Act, and the 8 percent educational set-aside in the Job Training Partnership Act.

programs. The amount of money from this source ranged from $2,000 to $122,00; half the private grants made were under $5,000.

By far the most frequent source of funding for the colleges' workplace education activities came from the businesses themselves. While the average amount received from companies ranks third on the list behind federal grants and full-time enrollment (FTE) reimbursements, for the majority of colleges that did not receive either federal or FTE monies, company financial support was their main source of funding. The amount that colleges were reimbursed by companies ranged from $300 to $750,000. One quarter of the colleges received under $6,000, the next fourth were reimbursed between $6,000 and $30,000, the next 25 percent received $30,000 to $84,000 from companies, and the top quartile were paid over $90,000.

Of the institutions that received reimbursement for all or some of the cost of workplace education programs from companies, 48.3 percent used at least some of this money to finance existing workplace education programs or to help finance more workplace education programs. Workplace education reimbursement funds are, at least in part, placed in the college's general operating fund in 46.7 percent of the institutions. Only 2.6 percent of the institutions have to return at least some of the money they are paid by the companies served to the state.

On a state-by-state basis, the funding patterns appear to mirror the national data. While the order may vary, the top three sources of funding are: payment by the firms, state full-time enrollment reimbursement, and federal grants or contracts.

How much demand by companies for workplace education do the community colleges perceive, and what are the possibilities for expansion of their workplace education programs? How much interest is there on the part of the community colleges to become more involved in providing workplace education to companies?

Almost a quarter, 23.6 percent, of institutions that already have workplace education programs, receive more requests from companies than they can meet. Nearly all (97.2 percent) of the colleges with workplace education programs in place would like to expand their programs to meet demand. In addition, one quarter of the institutions that are not presently involved in workplace education receive requests from companies asking for assistance in this area. Of these colleges that receive requests but do not yet have workplace programs, 90.2 percent would like to begin workplace education programs. Both groups felt that they could generate greater demand for the programs through marketing and public information.

Half of the colleges with workplace education programs felt that they could generate "a lot" of demand for workplace education through marketing and public information. An additional 38 percent thought that by marketing they could generate "some" demand, and 9 percent responded that demand could be increased "a little" amount. Very few of the respondents, only 1 percent, said that they could not generate any demand through marketing. A few colleges wrote to explain that they had tried to generate private sector demand for workplace education, but had been unsuccessful, and therefore the college was not involved in workplace education. Lack of company interest or willingness to pay for workplace education services was noted as a barrier to expanding or starting workplace education provision by less than 10 percent of the respondents.

There are not many differences among regions in terms of current and possible demand. Table 6 summarizes the regional responses to these questions. Regions 3 (AL, FL, GA, MS, TN) and 9 (AK, CA, HI, OR, WA) have the highest percentage of colleges reporting that they receive more requests from companies for assistance than they can meet. When these statistics are compared to the percentage of colleges in each region that provide workplace education, several possible conclusions arise. In Region 9, the higher than average demand these colleges experience may be due

TABLE 6

Postal Zip Region	% that Receive More Requests from Firms than They Can Meet	Do you believe that you could generate more demand through marketing and public information?			
		A Lot	Some	A Little	None
Zip Code Not Given	16.7	50.0	33.3	16.7	
0 CT, MA, ME, NH, NJ, PR, RI, VT	16.7	54.5	42.4	3.0	
1 DE, NY, PA	25.0	48.1	40.7	7.4	3.7
2 DC, MD, NC, SC, VA, WV	24.4	47.0	39.8	12.0	1.2
3 AL, FL, GA, MS, TN	39.6	58.9	30.4	10.7	
4 KY, IN, MI, OH	24.1	43.2	54.1	2.7	
5 IA, MN, MT, ND, SD, WI	25.8	62.9	25.7	8.6	2.9
6 KS, MO, IL, NE	19.0	33.3	55.6	8.9	2.2
7 AR, LA, OK, TX	28.2	59.1	31.8	9.1	
8 AZ, CO, ID, NM, NV, UT, WY	27.6	48.5	39.4	9.1	3.0
9 AK, CA, HI, OR, WA	36.7	48.2	37.5	14.3	

to the fact that this region ranks second from the bottom in the percentage of colleges having workplace education programs. In Region 3, an average number of colleges have workplace education programs (67.1 percent). Perhaps these programs are smaller than those in other regions, resulting in a lesser ability to meet demand. Another possibility is that the need for workplace education is higher in this region, which has a large number of immigrants and low high-school graduation rates.

Regions 0 (CT, MA, ME, NH, NJ, PR, RI, VT) and 5 (IA, MN, MT, ND, SD, WI) believe that through marketing they could boost demand the most, while Region 6 (KS, MO, IL, NE) is the least optimistic about the probability of generating demand through marketing. However, Region 6 reports the second-highest percentage of colleges already involved in workplace education. The colleges in Region 6 are already actively working with many employers and are busy marketing their services. As a result, they may be meeting more of the demand or may be more realistic in their assessment of it. Nevertheless, all the colleges see a significant potential for expanding their workplace education programs to more companies; on average all the regions report that they could generate somewhere between "a lot" and "some" demand with marketing and public information.

What are the most important barriers to the expansion of community colleges' provision of workplace education?

The questionnaire concluded with an open-ended question that asked the respondent to write in the two most important things that prevent them from expanding their workplace education program. These responses were then categorized into eight general barriers: lack of time (often for staff training or curriculum development), lack of funding, limited ability to market workplace education to business (often due to lack of time, money, staff), lack of personnel in general or lack of personnel trained as workplace education instructors, lack of space or facilities, lack of interest on the part of local companies, lack of company willingness to pay for workplace education, and "other." Table 7 summarizes the responses to this question.

Limited funding and personnel are the two top barriers preventing institutions from expanding (or starting) workplace education programs. Funding was listed by 33.3 percent of the institutions as the number one barrier to expansion of workplace education, and 22.6 percent ranked it as second. Lack of personnel was the number one barrier for 26.9 percent of the institutions and listed number two by 20.1 percent. The other top barriers mentioned either first or second included limited time for staff training or marketing efforts (15.5 percent), limited marketing capabilities (10.7 percent), lack of company interest or awareness of the problem (8.8 percent), lack of facility space (5.6 percent), and companies' unwillingness to pay for workplace education (4.2 percent). In addition to these responses,

19.8 percent of the institutions named something else as the primary barrier they faced. These "other" responses ranged from "the economy" in general, to the need for better training for instructors, to help in industry-specific curriculum development.

TABLE 7

% Listing Each Barrier

Barriers	First	Second
Lack of time	8.9	6.6
Lack of funding	33.3	22.6
Need for more marketing	3.5	7.2
Lack of personnel	26.9	20.1
Lack of space/facilities	2.0	3.6
Lack of company interest	4.4	4.4
Company unwillingness to pay	1.2	3.0
Other	19.8	32.5

The most striking difference in terms of demand for workplace education and barriers to expansion, is between colleges that report the funds they receive from companies are either placed in the college's general operating fund or are returned to the state, and those colleges that are allowed to use these funds to finance more workplace education services. The colleges that must give up at least some of the funds they receive face the same amount of demand for their services as the other colleges. They believe that they could generate the same amount of demand through marketing and public information as the other colleges. And they are just as likely to say that they want to expand their workplace education programs to meet the demand. However, these schools are significantly more likely to report lack of personnel as the most important barrier that prevents them from expanding their workplace education programs.

SUMMARY AND CONCLUSIONS

The research reported here represents a first step towards understanding the role of community colleges as providers of workplace education programs. The survey analysis focused on nine questions, the answers to which are summarized below:

① ***What percentage of community colleges are providing workplace education to companies?***

Even the most conservative calculations find that over one-fourth of colleges have workplace education programs. Since regional evidence does not indicate a response bias favoring colleges that offer workplace education, a much better estimate of incidence lies closer to the 68 percent reported by the survey respondents. On a regional level the percentage of colleges offering workplace education ranges from 56 to 88 percent.

② ***To how many and what type of companies do the community colleges provide workplace education?***

Colleges are working with all types of companies. They report that they are just as likely to be working with small companies (under 50 employees) as large companies (over 500 employees). Just under half of the companies the colleges are involved with are mid-sized, having between 50 and 500 employees. Colleges also provide workplace education to branch plants of large companies and a few franchises.

The colleges confirmed earlier findings by the Institute that workplace education takes place to a greater extent in the manufacturing sector and that the programs are usually taught at the company. Three-fourths of the programs are taught at the worksite. Sixty percent of the businesses that the colleges are working with are in manufacturing.

③ ***What skills are the community colleges teaching in their workplace education programs?***

Although the percentages vary according to state and regional demands, nearly all of the colleges are teaching traditional academic skills in addition to problem-solving and interpersonal skills. Three-fourths of the colleges teach mathematics; the same percentage is teaching reading and writing. Just over 40 percent of colleges

offer ESL programs and GED or alternative high school curricula. Over 60 percent teach problem-solving skills, and three-fourths provide instruction in interpersonal skills.

④ ***How often do employees who participate in programs through their employers enroll in other courses at the community college?***

Employees who come in contact with the college through their participation in workplace education programs are likely to continue their education at the college. Nearly 60 percent of colleges report that employees in their workplace education programs "often" or "sometimes" enroll in other courses (e.g., job-specific training or associate degree programs). Only a very few schools said that employees never enroll in other classes, while the remaining 40 percent were evenly split: they reported either that employees "almost never" continue their education, or that they did not know how often employees enrolled in other courses.

⑤ ***How do companies usually become associated with the community college as a workplace education provider?***

The response to this question varied by state, depending on the nature of workplace education and adult education within the state. On the whole, colleges most frequently (40 percent) responded that they could not distinguish which organization, the school or the business, more often made the initial contact. Just over one-third of the colleges say that they make the first contact, recruiting the companies to become involved in their workplace education program. Another quarter report that the company takes the initiative to contact them.

⑥ ***What resources, both financial and in terms of personnel, do the community colleges devote to workplace education programs?***

Two-thirds of the colleges with workplace education employ "work force specialists" or other staff who help companies assess the needs of their employees and help with the design of those programs. Colleges that have full-time workplace education instructors on average employ six such teachers. Nearly all the colleges responded that they have part-time teachers who work with companies; these schools have approximately 14 part-time teachers.

The average amount spent on workplace education in the last fiscal year by each college was $90,000. One-fourth of the colleges said that they spent nothing on workplace education; in some cases these colleges clarified their response, specifying that they spent nothing more than the amount they received from companies for their services. On a per company basis, colleges spent slightly more

than $10,000 and received just over $7,000 as partial or full reimbursement of costs by each company.

⑦ ***From what sources do the community colleges receive funding for workplace education programs?***

The most frequent source of funding for workplace education comes from the companies that benefit from the programs. Nearly three-fourths of the colleges receive money from this source. The next most common source of funding is state FTE reimbursements; 46 percent use FTE funds. For those that receive it, the largest source of funding in terms of dollars received is federal grants or contracts (i.e., funds from the Small Work Force Literacy Grant Program, the Adult Education Act, Carl D. Perkins Act, and 8 percent JTPA educational set-aside). However, only one-fifth of the colleges report that they get federal money for workplace education efforts. A third of the colleges receive state grants or appropriations specifically for workplace education. Trailing behind both in terms of dollars given out and percentage of colleges receiving the funds are state grants (not earmarked for workplace education) and foundation or private grants.

⑧ ***How much demand by companies for workplace education do the community colleges perceive, and what are the possibilities for expansion of their workplace education programs? How much interest is there on the part of the community colleges in becoming more involved in providing workplace education to companies?***

Approximately a quarter of colleges with workplace education programs receive more requests from companies than they can meet. In addition, a fourth of the colleges that do not have workplace education programs receive requests for this type of service from businesses. Over 90 percent of these colleges would like to either expand their existing program or start such a program at their school. The colleges are also very optimistic about the amount of demand for workplace education that they could generate through marketing and public information.

⑨ ***What are the most important barriers to the expansion of community colleges' provision of workplace education?***

A third of the colleges wrote that funding was the most important barrier preventing them from expanding their workplace education program. Another fourth noted lack of personnel (in general, or lack of trained workplace education instructors). Other responses included: lack of time (8.9 percent); lack of company interest (4.4 percent); need for more marketing (3.5 percent); lack of space or facilities (2 percent); and company unwillingness to pay (1.2 percent). An additional 20 percent answered this open-ended question with some other comment.

These "other" important barriers varied from "the economy" in general, to the need for better training for instructors, to help in developing industry-specific curriculum.

Community colleges have clearly established themselves as a major possible provider of workplace education. The short survey revealed a great deal in terms of the extent to which colleges are working with companies to provide education to employees. However, nothing qualitative can be gleaned from the data. Certainly, some of the colleges are model providers with well-trained teachers. They customize educational plans fit to each company and use good assessment and evaluation tools. Other colleges are hesitant about working with local employers, cannot find the funds or staff needed to launch a workplace education program, or offer only pre-packaged GED or Adult Basic Education curriculum. The Institute's case study research on firms discerned more about the variances of quality in the provision of workplace education. That research found that, while companies and providers are often inexperienced in workplace education, with trial and error (and most importantly support for staff and curriculum development), excellent programs are being developed. Many colleges have begun down this road and are becoming leading providers of workplace education in their communities.

The efforts by these colleges appear to be supported by employers. Community college instructors are the most frequent type of teacher (after in-house company trainers) employed by companies. Furthermore, both companies that have education programs, and those that do not, choose community colleges, vocational schools, or technical institutes as the preferred source of information and technical assistance on workplace education (Bassi, 1992b). In some cases, employers are already familiar with the community college as a place they can send an employee who wishes to move up in the company by learning more job-specific skills or earning a certificate or degree. The survey of the AACC membership also shows that workplace education programs may be a good way to connect on-site general skills upgrading with further job-specific training programs, either at the work site or at the college. While many of the colleges report that participants in workplace education enroll in other classes, this observation was not supported by the Institute's research on firms. Perhaps the phenomenon is too recent to fully evaluate its impacts on the continuing education of the participants.

There is a role for policy to play in facilitating the expansion of workplace education. The colleges are very interested in expanding their current programs, and businesses are interested in implementing training programs that include general education. The major barriers that the colleges need help in overcoming are the lack of funding for workplace education activities and the need for more trained personnel as instructors and marketers of these programs.

Businesses are paying for this service, and should be expected to pay, since they indicate that workplace education does have very real positive effects on workers' self-confidence, employees' ability to use new technology, customer satisfaction, and employees' ability to work both as a team and independently, to name just a few of the benefits (Bassi, 1992b). However, while businesses may be willing to pay for the cost of instruction for their employees, they are not always so willing to underwrite the expenses of curriculum development, teacher training, and the other overhead expenses of workplace education programs. This discrepancy may be seen by the fact that the colleges reported they spent over $10,000 per company in the last fiscal year, while they received only $7,000 per company as reimbursement of the costs. These overhead costs of running workplace education programs can be centralized at the colleges, and therefore the need for unnecessary duplication is eliminated. However, there is still the need for funding these outlays and for supplying technical assistance and information to the workplace education providers.

There is a responsibility on the part of the state and federal governments to recognize the importance of workplace education for improving the competitiveness of companies in the United States by upgrading the skills of their employees and for creating a system that supports the life-long learning needs of this country's citizens. The role that the federal and state governments can play in supporting the efforts of businesses, community colleges, and other workplace education providers is outlined in the Institute's summary report on the project, titled *The Missing Link: Workplace Education in Small Business* (Chisman, 1992). The federal initiative described by Mr. Chisman would supply the support needed to enable community colleges to overcome the barriers that are preventing them from expanding their workplace education programs. This paper shows that states can make a significant difference in helping lift the personnel constraint felt by many colleges, by allowing more of the money collected from the companies served to be recirculated and used to finance workplace education services.

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APPENDIX

AACC and Southport Institute
National Workplace Education Survey

Institution: _____ Contact Person:_____
Telephone No: _____ Zip Code: _____

For purposes of this survey, a **"workplace education program"** is defined as a program established for, or in cooperation with, a private sector company to help the employees of that company to: 1) obtain a GED or some other alternative high school degree, or 2) upgrade basic skills: reading, writing, mathematics, English as a Second Language, problem solving, or interpersonal skills.

Please circle the number of your response

1. During the past 2 years has your institution provided workplace education (WPE) programs to companies? (**Please DO NOT count JTPA activities.**)

1. YES, *Please skip to question 3* 2. NO

2. Do you receive requests from companies asking for assistance with workplace education?

1. YES, *Please skip to question 18* 2. NO, *Thank you for your help. Please return this questionnaire in the envelope provided.*

3. In what year did your college begin to provide WPE? _____

4. In 1991, approximately how many companies were served by your WPE program? _____

5. Approximately how many of these companies were:

Small firms (less than 50 employees) _____

Medium-sized firms (50-500 employees) _____

Large firms (more than 500 employees) _____

Branch plants of large companies _____

Franchisees of large companies _____

6. Approximately how many of your WPE programs were for companies in manufacturing? _____

7. Approximately how many of your WPE programs were offered at the company's workplace? _____

8. What is typically included in your institution's WPE courses? (Circle all that apply.)

1. Mathematics
2. English as a Second Language
3. Reading and writing English
4. GED or alternative high school degree
5. Techniques for identifying and solving problems
6. Interpersonal skills (e.g., effective communication, team building)

9. Do workers who participate in your WPE programs also enroll in other courses (such as job-specific training or associate degree programs), either after they complete the WPE program or at the same time they are participating in it?

1. Often (75%)
2. Sometimes (50%)
3. Almost never (25%)
4. Never (0%)
5. Do not know

10. How do companies usually become involved in your WPE programs?

1. The company contacts the college
2. The college contacts the company

11. Approximately how much did your college spend on providing WPE services in its last fiscal year?

$ _____ 0. None X. Do not know

12. In your last fiscal year, has your WPE program expanded, contracted, or remained about the same in terms of:

	EXPANDED	CONTRACTED	SAME
Spending	1	2	3
Number of students served	1	2	3
Number of firms served	1	2	3

13. Approximately how many full- and/or part-time teachers provide work force education for your college?

_____full-time _____part-time

14. Do you employ "work force specialists" or other staff who help companies understand their need for WPE programs and help with the design of those programs?

1. YES 2. NO

15. In your last fiscal year, did you receive funding to support your WPE programs from the following sources? (If the information is readily available, please estimate the amount of funding received from each source.)

	YES	NO
FTE state reimbursement ($_____)	1	2
Special state grant or appropriation for WPE ($_____)	1	2
Special state grant or appropriation for some other purpose ($____)	1	2
Federal grant or contract ($_____)	1	2
Foundation or other private grant ($_____)	1	2
Reimbursement of all or some of the cost by companies ($_____)	1	2

16. If you receive reimbursement for all or some of the cost of WPE programs from companies, how are these funds used? (Circle all that apply.)

1. To finance more WPE services
2. Placed in the college's general operating fund
3. Returned to the state

17. Do you receive more requests from companies asking for assistance with WPE than you can meet?

1. YES 2. NO

18. Do you believe that you could generate more demand through marketing and public information?

1. A Lot 2. Some 3. A Little 4. None, *Please skip to question 20*

19. Would you like to expand your WPE program to meet the demand?

1. YES 2. NO

20. What are the two most important things that prevent you from expanding your WPE program?

1. _____

2. _____

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